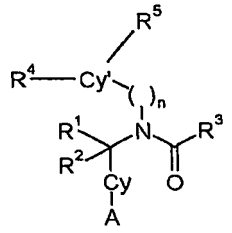
Claims

1. Use of an alkynyl aryl carboxamide of Formula (I') :



(I')

as well as its geometrical isomers, its optically active forms as enantiomers, diastereomers and its racemate forms, as well as pharmaceutically acceptable salts and pharmaceutically active derivatives thereof, wherein

A is a C_2-C_{15} alkynyl, C_2-C_6-alkynyl aryl, C_2-C_6-alkynyl heteroaryl;

Cy is an aryl, heteroaryl, a 3-8 membered cycloalkyl or a heterocycle group;

Cy' is an aryl, which may optionally be fused by a 3-8 membered cycloalkyl;

n is 0 or 1;

R^1 and R^2 are independently from each other selected from the group consisting of hydrogen or C_1-C_6-alkyl;

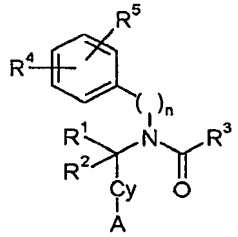
R^3 is selected from the group consisting of C_1-C_6-alkyl, C_2-C_6-alkenyl, C_2-C_6-alkynyl, C_1-C_6-alkoxy, C_1-C_6-alkyl amine, C_1-C_6-alkyl alkoxy, C_1-C_6-alkyl carboxy, aryl, heteroaryl, saturated or unsaturated 3-8-membered cycloalkyl, 3-8-membered heterocycloalkyl, C_1-C_6-alkyl aryl, C_1-C_6-alkyl heteroaryl, C_2-C_6-alkenyl aryl, C_2-C_6-alkenyl heteroaryl, C_2-C_6-alkynyl aryl, C_2-C_6-alkynyl heteroaryl, C_1-C_6-alkyl

cycloalkyl, C_1-C_6-alkyl heterocycloalkyl, C_2-C_6-alkenyl cycloalkyl, C_2-C_6-alkenyl heterocycloalkyl, C_2-C_6-alkynyl cycloalkyl, C_2-C_6-alkynyl heterocycloalkyl;

R^4 and R^5 are independently from each other selected from the group consisting of H, hydroxy, fluoro, C_1-C_6 alkyl, carboxy, C_1-C_6 alkoxy, C_1-C_3 alkyl carboxy, C_2-C_3 alkenyl carboxy, C_2-C_3 alkynyl carboxy, whereby at least one of R^4 or R^5 is neither a hydrogen nor a C_1-C_6 alkyl;

for the preparation of a medicament for the treatment and/or prevention of an inflammatory disease or a metabolic disorders mediated by insulin resistance or hyperglycemia, comprising diabetes, inadequate glucose tolerance, hyperlipidemia, hypertriglyceridemia, hypercholesterolemia, obesity, polycystic ovary syndrome (PCOS).

2. Use of an alkynyl aryl carboxamide of Formula (I) according to claim 1 :



(I)

as well as its geometrical isomers, its optically active forms as enantiomers, diastereomers and its racemate forms, as well as pharmaceutically acceptable salts and pharmaceutically active derivatives thereof, wherein

A is a C_2-C_{15} alkynyl, C_2-C_6-alkynyl aryl, C_2-C_6-alkynyl heteroaryl;

Cy is an aryl, heteroaryl, a 3-8 membered cycloalkyl or a heterocycle group;

n is 0 or 1;

R^1 and R^2 are independently from each other selected from the group consisting of hydrogen or C_1-C_6-alkyl;

R^3 is selected from the group consisting of C_1-C_6-alkyl, C_2-C_6-alkenyl, C_2-C_6-alkynyl, C_1-C_6-alkoxy, C_1-C_6-alkyl amine, C_1-C_6-alkyl alkoxy, C_1-C_6-alkyl carboxy, aryl, heteroaryl, saturated or unsaturated 3-8-membered cycloalkyl, 3-8-membered heterocycloalkyl, C_1-C_6-alkyl aryl, C_1-C_6-alkyl heteroaryl, C_2-C_6-alkenyl aryl, C_2-C_6-alkenyl heteroaryl, C_2-C_6-alkynyl aryl, C_2-C_6-alkynyl heteroaryl, C_1-C_6-alkyl cycloalkyl, C_1-C_6-alkyl heterocycloalkyl, C_2-C_6-alkenyl cycloalkyl, C_2-C_6-alkenyl heterocycloalkyl, C_2-C_6-alkynyl cycloalkyl, C_2-C_6-alkynyl heterocycloalkyl;

R^4 and R^5 are each independently from each other selected from the group consisting of H, hydroxy, fluoro, C_1-C_6 alkyl, carboxy, C_1-C_6 alkoxy, C_1-C_3 alkyl carboxy, C_2-C_3 alkenyl carboxy, C_2-C_3 alkynyl carboxy, whereby at least one of R^4 or R^5 is not a hydrogen or C_1-C_6 alkyl;

for the preparation of a medicament for the treatment and/or prevention of an inflammatory disease or a metabolic disorders mediated by insulin resistance or hyperglycemia, comprising diabetes, inadequate glucose tolerance, hyperlipidemia, hypertriglyceridemia, hypercholesterolemia, obesity, polycystic ovary syndrome (PCOS).

3. Use of an alkynyl aryl carboxamide according to claim 1 or 2 for the preparation of a medicament for the treatment and/or prevention of diabetes type II, obesity or for appetite regulation.

4. Use of an alkynyl aryl carboxamide according to any of claim 1 to 3 for the preparation of a medicament for the treatment and/or prevention of an inflammatory disease.

5. Use of an alkynyl aryl carboxamide according to any of claim 1 to 4 for the preparation of a pharmaceutical composition for the modulation of the activity of PTPs.

6. Use according to claim 5 wherein the PTP is PTP1B.

7. Use according to claim 6 wherein said modulation consists in the inhibition of PTP1B.

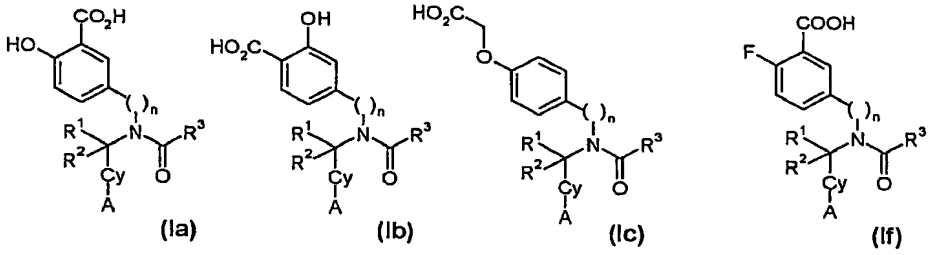
8. Use according to claim 7 for the treatment or prevention of disorders mediated by PTP1B.

9. Use according to any of claims 1 to 8, wherein R^1 and R^2 are each H.

10. Use according to any of claims 1 to 9, wherein Cy is a phenyl group.

11. Use according to any of claims 1 to 8, wherein A is a moiety of the formula $-C\equiv C-R^6$ wherein R^6 is C_6-C_{12} alkyl, a 3-8 membered cycloalkyl, C_1-C_6 alkyl-(3-8 membered) cycloalkyl, C_2-C_6-alkenyl, C_2-C_6-alkynyl, phenyl, C_1-C_{12} alkyl phenyl, C_2-C_6-alkenyl phenyl, C_2-C_6-alkynyl phenyl.

12. An alkynyl aryl carboxamide according to any of formulae (Ia), (Ib), (Ic) or (If):



(Ia) (Ib) (Ic) (If)

wherein

A is a C_2-C_{15} alkynyl, C_2-C_6-alkynyl aryl, C_2-C_6-alkynyl heteroaryl;

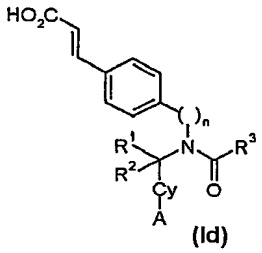
Cy is an aryl, heteroaryl, a 3-8 membered cycloalkyl or heterocycle group; n is 0 or 1;

R^1 and R^2 are independently from each other is selected from the group consisting of hydrogen or C_1-C_6-alkyl;

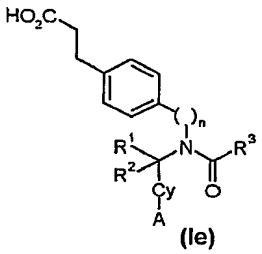
R^3 is selected from the group consisting of H, hydroxy, C_1-C_6-alkyl, C_2-C_6-alkenyl, C_2-C_6-alkynyl, C_1-C_6-alkoxy, C_1-C_6-alkyl amine, C_1-C_6-alkyl alkoxy, C_1-C_6-alkyl carboxy, aryl, heteroaryl, saturated or unsaturated 3-8-membered cycloalkyl, 3-8-membered heterocycloalkyl, an acyl moiety, C_1-C_6-alkyl aryl, C_1-C_6-alkyl heteroaryl, C_2-C_6-alkenyl aryl, C_2-C_6-alkenyl heteroaryl, C_2-C_6-alkynyl aryl, C_2-C_6-alkynyl heteroaryl, C_1-C_6-alkyl cycloalkyl, C_1-C_6-alkyl heterocycloalkyl, C_2-C_6-alkenyl cycloalkyl, C_2-C_6-alkenyl heterocycloalkyl, C_2-C_6-alkynyl cycloalkyl, C_2-C_6-alkynyl heterocycloalkyl.

13. An alkynyl aryl carboxamide according to claim 12 having the formula (Ib).

14. An alkynyl aryl carboxamide according to any of formulae (Id) or (Ie):



(Id)



(Ie)

wherein

A is a C_2-C_{15} alkynyl, C_2-C_6-alkynyl aryl, C_2-C_6-alkynyl heteroaryl;

Cy is an aryl, heteroaryl, a 3-8 membered cycloalkyl or heterocycle group; n is 0 or 1;

R^1 and R^2 are independently from each other is selected from the group consisting of hydrogen or C_1-C_6-alkyl;

R^3 is selected from the group consisting of C_1-C_6-alkyl, C_2-C_6-alkenyl, C_2-C_6-alkynyl, C_1-C_6-alkoxy, C_1-C_6-alkyl amine, C_1-C_6-alkyl alkoxy, C_1-C_6-alkyl carboxy, aryl, heteroaryl, saturated or unsaturated 3-8-membered cycloalkyl, 3-8-membered heterocycloalkyl, an acyl moiety, C_1-C_6-alkyl aryl, C_1-C_6-alkyl heteroaryl, C_2-C_6-alkenyl aryl, C_2-C_6-alkenyl heteroaryl, C_2-C_6-alkynyl aryl, C_2-C_6-alkynyl heteroaryl, C_1-C_6-alkyl cycloalkyl, C_1-C_6-alkyl heterocycloalkyl, C_2-C_6-alkenyl cycloalkyl, C_2-C_6-alkenyl heterocycloalkyl, C_2-C_6-alkynyl cycloalkyl, C_2-C_6-alkynyl heterocycloalkyl.

15. An alkynyl aryl carboxamide according to any of claims 12 to 14, wherein R^1 and R^2 are each H, Cy is a phenyl group, A is a moiety of the formula -C≡C-R^6 wherein R^6 is C_6-C_{12} alkyl, a 3-8 membered cycloalkyl, C_1-C_6 alkyl-(3-8 membered) cycloalkyl, C_2-C_6-alkenyl, C_2-C_6-alkynyl, phenyl, C_1-C_{12} alkyl phenyl, C_2-C_6-alkenyl phenyl, C_2-C_6-alkynyl phenyl.

16. An alkynyl aryl carboxamide according to any of claims 12 to 15, selected from the group consisting of:

5-[(3-Cyclopentylpropanoyl)(4-dec-1-ynylbenzyl)amino]-2-hydroxybenzoic acid

5-[(3-Cyclopentylpropanoyl)(4-dec-1-ynylbenzyl)amino]-2-hydroxybenzoic acid, N-methyl-D-glucamine

5-[{4-[(4-Butylphenyl)ethynyl]benzyl}(3-cyclopentylpropanoyl)amino]-2-hydroxybenzoic acid

5-[{4-[(4-Butylphenyl)ethynyl]benzyl}(3-cyclopentylpropanoyl)amino]-2-hydroxybenzoic acid, N-methyl-D-glucamine

5-[Acetyl(4-dec-1-ynylbenzyl)amino]-2-hydroxybenzoic acid

5-[(4-Dec-1-ynylbenzyl)(pyridin-3-ylcarbonyl)amino]-2-hydroxybenzoic acid

5-[(4-Dec-1-ynylbenzyl)(isonicotinoyl)amino]-2-hydroxybenzoic acid

5-{(4-Dec-1-ynylbenzyl)[(2*E*)-3-phenylprop-2-enoyl]amino}-2-hydroxybenzoic acid

5-[(4-Dec-1-ynylbenzyl)(thien-2-ylacetyl)amino]-2-hydroxybenzoic acid

5-((4-Dec-1-ynylbenzyl){(2*E*)-3-[3-(trifluoromethyl)phenyl]prop-2-enoyl}amino)-2-hydroxybenzoic acid

5-[(4-Dec-1-ynylbenzyl)(phenoxyacetyl)amino]-2-hydroxybenzoic acid

[4-({(4-Dec-1-ynylbenzyl)[(2*E*)-3-phenylprop-2-enoyl]amino}methyl)phenoxy]acetic acid

(4-{[(3-Cyclopentylpropanoyl)(4-dec-1-ynylbenzyl)amino]methyl}phenoxy)acetic acid

(4-{[(4-Dec-1-ynylbenzyl)(hexanoyl)amino]methyl}phenoxy)acetic acid

(4-{[Acetyl(4-dec-1-ynylbenzyl)amino]methyl}phenoxy)acetic acid

2-(Carboxymethoxy)-5-({(4-dec-1-ynylbenzyl)[(2*E*)-3-phenylprop-2-enoyl]amino}methyl)benzoic acid

2-(Carboxymethoxy)-5-{[(3-cyclopentylpropanoyl)(4-dec-1-ynylbenzyl)amino]methyl}benzoic acid

5-{[Acetyl(4-dec-1-ynylbenzyl)amino]methyl}-2-(carboxymethoxy)benzoic acid

(2*E*)-3-(4-{[(4-Dec-1-ynylbenzyl)(3-phenylpropanoyl)amino]methyl}phenyl)acrylic acid

(2*E*)-3-{4-[(4-Dec-1-ynylbenzyl)(3-phenylpropanoyl)amino]phenyl}acrylic acid

(2*E*)-3-{4-[Acetyl(4-dec-1-ynylbenzyl)amino]phenyl}acrylic acid

3-(4-{[(3-Cyclopentylpropanoyl)(4-dec-1-ynylbenzyl)amino]methyl}phenyl)propanoic acid

5-[{4-[(4-Butylphenyl)ethynyl]benzyl}(cyclohexylcarbonyl)amino]-2-hydroxybenzoic acid

5-[{4-[(4-Butylphenyl)ethynyl]benzyl}(hexanoyl)amino]-2-hydroxybenzoic acid, N-methyl-D-glucamine

5-((4-tert-Butylbenzoyl){4-[(4-butylphenyl)ethynyl]benzyl}amino)-2-hydroxybenzoic acid, N-methyl-D-glucamine

5-((Biphenyl-4-ylcarbonyl){4-[(4-butylphenyl)ethynyl]benzyl}amino)-2-hydroxybenzoic acid

5-[{4-[(4-Butylphenyl)ethynyl]benzyl}(3,3-dimethylbutanoyl)amino]-2-hydroxybenzoic acid

5-[{4-[(4-Butylphenyl)ethynyl]benzyl}(2,3-dihydro-1-benzofuran-5-ylcarbonyl)amino]-2-hydroxybenzoic acid

5-[{4-[(4-Butylphenyl)ethynyl]benzyl}(7-carboxyheptanoyl)amino]-2-hydroxybenzoic acid

5-((1,3-Benzodioxol-5-ylcarbonyl){4-[(4-butylphenyl)ethynyl]benzyl}amino)-2-hydroxybenzoic acid

5-[{4-[(4-Butylphenyl)ethynyl]benzyl}(2,2-dimethylpropanoyl)amino]-2-hydroxybenzoic acid

5-([(Benzyloxy)acetyl]{4-[(4-butylphenyl)ethynyl]benzyl}amino)-2-hydroxybenzoic acid

5-[{4-[(4-Butylphenyl)ethynyl]benzyl}(4-hexylbenzoyl)amino]-2-hydroxybenzoic acid

5-[{4-[(4-Butylphenyl)ethynyl]benzyl}(2-naphthoyl)amino]-2-hydroxybenzoic acid

5-((1-Benzothien-2-ylcarbonyl){4-[(4-butylphenyl)ethynyl]benzyl}amino)-2-hydroxybenzoic acid, N-methyl-D-glucamine

4-[{4-[(4-Butylphenyl)ethynyl]benzyl}(3-cyclopentylpropanoyl)amino]-2-hydroxybenzoic acid, N-methyl-D-glucamine

5-{|{4-[(4-Butylphenyl)ethynyl|benzyl}(3-cyclopentylpropanoyl)amino|methyl}-2-hydroxybenzoic acid, N-methyl-D-glucamine

5-{[{4-[(4-Butylphenyl)ethynyl]benzyl}(hexanoyl)amino]methyl}-2-hydroxybenzoic acid

(4-{[{4-[(4-Butylphenyl)ethynyl]benzyl}(hexanoyl)amino]methyl}phenoxy)acetic acid, N-methyl-D-glucamine

(4-{[{4-[(4-Butylphenyl)ethynyl]benzyl}(cyanoacetyl)amino]methyl}phenoxy)acetic acid

(4-{[{4-[(4-Butylphenyl)ethynyl]benzyl}(1H-indazol-3-ylcarbonyl)amino]methyl}-phenoxy)acetic acid

(4-{[{4-[(4-Butylphenyl)ethynyl]benzyl}(pent-4-ynoyl)amino]methyl}phenoxy)-acetic acid

[4-({{4-[(4-Butylphenyl)ethynyl]benzyl}[(6-hydroxypyridin-3-yl)carbonyl]amino}-methyl)-phenoxy]acetic acid

[4-({{4-[(4-Butylphenyl)ethynyl]benzyl}[(2-methoxyethoxy)acetyl]amino}methyl)-phenoxy]acetic acid

(4-{[{4-[(4-Butylphenyl)ethynyl]benzyl}(1H-pyrazol-4-ylcarbonyl)amino]-methyl}phenoxy)acetic acid

3-[(3-Cyclopentylpropanoyl)(4-dec-1-yn-1-ylbenzyl)amino]benzoic acid, N-methyl-D-glucamine

3-[(4-Dec-1-yn-1-ylbenzyl)(hexanoyl)amino]benzoic acid

4-{[{4-[(4-Butylphenyl)ethynyl]benzyl}(3-cyclopentylpropanoyl)amino]methyl}-benzoic acid

4-{[{4-[(4-Butylphenyl)ethynyl]benzyl}(hexanoyl)amino]methyl}benzoic acid

4-[((4-tert-Butylbenzoyl){4-[(4-butylphenyl)ethynyl]benzyl}amino)methyl]benzoic acid

4-[{4-[(4-Butylphenyl)ethynyl]benzyl}(hexanoyl)amino]benzoic acid

4-[{4-[(4-Butylphenyl)ethynyl]benzyl}(3-cyclopentylpropanoyl)amino]benzoic acid

8-[{4-[(4-Butylphenyl)ethynyl]benzyl}(3-cyclopentylpropanoyl)amino]-5,6,7,8-tetrahydronaphthalene-2-carboxylic acid, N-methyl-D-glucamine

5-[{4-[(4-Chlorophenyl)ethynyl]benzyl}(3-cyclopentylpropanoyl)amino]-2-hydroxybenzoic acid, N-methyl-D-glucamine

5-[{4-[(4-Chlorophenyl)ethynyl]benzyl}(4-heptylbenzoyl)amino]-2-hydroxybenzoic acid

5-[{4-[(4-Chlorophenyl)ethynyl]benzyl}(isoxazol-5-ylcarbonyl)amino]-2-hydroxy-benzoic acid

5-[{4-[(4-Chlorophenyl)ethynyl]benzyl}(2-thienylacetyl)amino]-2-hydroxybenzoic acid

5-[{4-[(4-Chlorophenyl)ethynyl]benzyl}(3-phenylpropanoyl)amino]-2-hydroxy-benzoic acid, N-methyl-D-glucamine

5-[{4-[(4-Chlorophenyl)ethynyl]benzyl}(4-methoxybenzoyl)amino]-2-hydroxy-benzoic acid, N-methyl-D-glucamine

5-[{4-[(4-Chlorophenyl)ethynyl]benzyl}(3-fluorobenzoyl)amino]-2-hydroxybenzoic acid, N-methyl-D-glucamine

5-[{4-[(4-Chlorophenyl)ethynyl]benzyl}(cyclohexylcarbonyl)amino]-2-hydroxybenzoic acid, N-methyl-D-glucamine

5-(acetyl{4-[(4-Chlorophenyl)ethynyl]benzyl}amino)-2-hydroxybenzoic acid, N-methyl-D-glucamine

5-[{4-[(4-Butylphenyl)ethynyl]-2-fluorobenzyl}(3-cyclopentylpropanoyl)amino]-2-hydroxybenzoic acid, N-methyl-D-glucamine

8-((3-Cyclopentylpropanoyl){4-[(4-fluorophenyl)ethynyl]benzyl}amino)-5,6,7,8-tetrahydronaphthalene-2-carboxylic acid, N-methyl-D-glucamine

5-[({6-[(4-Butylphenyl)ethynyl]pyridin-3-yl}methyl)(3-cyclopentylpropanoyl)-amino]-2-hydroxybenzoic acid, N-methyl-D-glucamine

5-[{4-[(4-Butylphenyl)ethynyl]benzyl}(3-cyclopentylpropanoyl)amino]-2-fluorobenzoic acid, N-methyl-D-glucamine

5-[{4-[(4-Butylphenyl)ethynyl]benzyl}(3,3-dimethylbutanoyl)amino]-2-fluorobenzoic acid, N-methyl-D-glucamine

5-[{4-[(4-Butylphenyl)ethynyl]benzyl}(2-thienylacetyl)amino]-2-fluorobenzoic acid, N-methyl-D-glucamine

4-[{4-[(4-Butylphenyl)ethynyl]benzyl}(3,3-dimethylbutanoyl)amino]-2-hydroxybenzoic acid, N-methyl-D-glucamine

3-[{4-[(4-Butylphenyl)ethynyl]benzyl}(3-cyclopentylpropanoyl)amino]-4-fluorobenzoic acid

4-[{4-[(4-Chlorophenyl)ethynyl]benzyl}(3-cyclopentylpropanoyl)amino]-2-hydroxybenzoic acid, N-methyl-D-glucamine

4-(Acetyl{4-[(4-butylphenyl)ethynyl]benzyl}amino)-2-hydroxybenzoic acid, N-methyl-D-glucamine

4-[{4-[(4-Butylphenyl)ethynyl]benzyl}(cyclohexylcarbonyl)amino]-2-hydroxybenzoic acid, N-methyl-D-glucamine

4-[{4-[(4-Butylphenyl)ethynyl]benzyl}(hexanoyl)amino]-2-hydroxybenzoic acid, N-methyl-D-glucamine

4-[{4-[(4-Butylphenyl)ethynyl]benzyl}(3-cyclopentylpropanoyl)amino]-2-fluorobenzoic acid, N-methyl-D-glucamine

4-[{4-[(4-Butylphenyl)ethynyl]benzyl}(2,2-dimethylpropanoyl)amino]-2-hydroxybenzoic acid, N-methyl-D-glucamine

4-((3-Cyclopentylpropanoyl){4-[(4-methoxyphenyl)ethynyl]benzyl}amino)-2-hydroxybenzoic acid, N-methyl-D-glucamine

4-[{4-[(4-tert-Butylphenyl)ethynyl]benzyl}(3-cyclopentylpropanoyl)amino]-2-hydroxybenzoic acid, N-methyl-D-glucamine

4-((3-Cyclopentylpropanoyl){4-[(4-propoxyphenyl)ethynyl]benzyl}amino)-2-hydroxybenzoic acid, N-methyl-D-glucamine

4-((3-Cyclopentylpropanoyl){4-[(4-propylphenyl)ethynyl]benzyl}amino)-2-hydroxybenzoic acid, N-methyl-D-glucamine

4-{(3-Cyclopentylpropanoyl)[4-(5-phenylpent-1-yn-1-yl)benzyl]amino}-2-hydroxybenzoic acid, N-methyl-D-glucamine

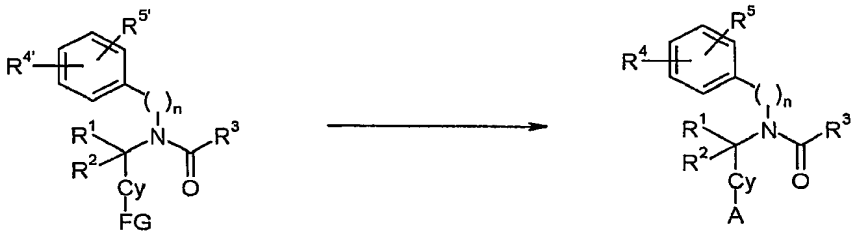
17. An alkynyl aryl carboxamide according to any of the claims 12 to 15 for use as a medicament.

18. A pharmaceutical composition containing at least one alkynyl aryl carboxamide according to any of claims 12 to 15 and a pharmaceutically acceptable carrier, diluent or excipient thereof.

19. A pharmaceutical composition according to claim 18 further comprising at least one supplementary drug selected from the group consisting of insulin, aldose reductase inhibitors, alpha-glucosidase inhibitors, sulfonyl urea agents, biguanides, thiazolidindiones, PPARs agonists, c-Jun Kinase or GSK-3 inhibitors.

20. A pharmaceutical composition according to claim 19 wherein said supplementary drug is selected from the group consisting of a rapid acting insulin, an intermediate acting insulin, a long acting insulin, a combination of intermediate and rapid acting insulins, Minalrestat, Tolrestat, Sorbinil, Methosorbinil, Zopolrestat, Epalrestat, Zenarestat, Imirestat, Ponalrestat, ONO-2235, GP-1447, CT-112, BAL-ARI 8, AD-5467, ZD5522, M-16209, NZ-314, M-79175, SPR-210, ADN 138, or SNK-860, Miglitol, Acarbose, Glipizide, Glyburide, Chlorpropamide, Tolbutamide, Tolazamide, or Glimepiride.

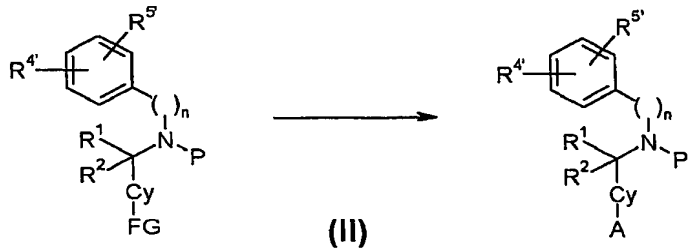
21. A method of preparing an alkynyl aryl carboxamide according to any of claims 12 to 15, comprising the de-protection and/or transformation step of :



(Z) (I)

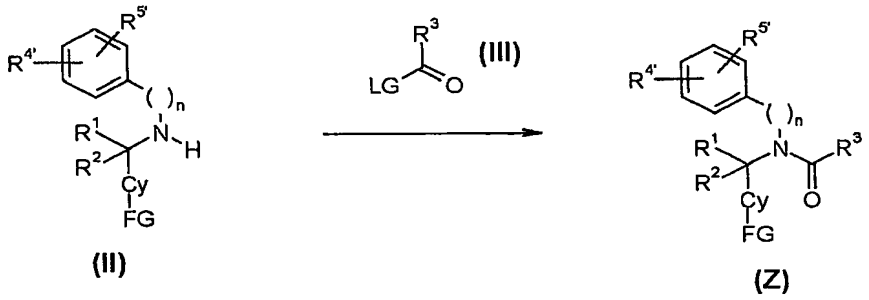
wherein R^1, R^2, R^3, R^4, R^5, $R^{4'}$, $R^{5'}$, n and Cy are as above defined and FG is A or a leaving group.

22. A method of preparing an alkynyl aryl carboxamide according to any of claims 12 to 15, comprising the transformation step of :



wherein R^1, R^2, $R^{4'}$, $R^{5'}$, A, n and Cy are as above defined and FG is a leaving group and P is hydrogen or a suitable protecting group.

23. A method of preparing an alkynyl aryl carboxamide according to any of claims 12 to 15, comprising the transformation step of :



wherein R^1, R^2, R^3, $R^{4'}$, $R^{5'}$, A, n and Cy are as above defined and LG is a leaving group; FG is A or a leaving group.

24. An intermediate compound (II) selected from the group consisting of :

6-[(4-Dec-1-ynylbenzyl)amino]-2,2-dimethyl-4H-1,3-benzodioxin-4-one

6-({4-[(4-Butylphenyl)ethynyl]benzyl}amino)-2,2-dimethyl-4H-1,3-benzodioxin-4-one

Methyl (4-{[(4-dec-1-ynylbenzyl)amino]methyl}phenoxy)acetate

Methyl 5-{[(4-dec-1-ynylbenzyl)amino]methyl}-2-(2-methoxy-2-oxoethoxy)benzoate, hydrochloride salt

Methyl (2E)-3-(4-{[(4-dec-1-ynylbenzyl)amino]methyl}phenyl)-acrylate

Ethyl (2E)-3-{4-[(4-dec-1-ynylbenzyl)amino]phenyl}acrylate

Methyl 3-(4-{[(4-dec-1-ynylbenzyl)amino]methyl}phenyl)propanoate

7-({4-[(4-Butylphenyl)ethynyl]benzyl}amino)-2,2-dimethyl-4H-1,3-benzodioxin-4-one

6-[({4-[(4-Butylphenyl)ethynyl]benzyl}amino)methyl]-2,2-dimethyl-4H-1,3-benzodioxin-4-one

Methyl 3-[(4-dec-1-yn-1-ylbenzyl)amino]benzoate hydrochloride

Methyl 4-[({4-[(4-butylphenyl)ethynyl]benzyl}amino)methyl]benzoate

Ethyl 4-({4-[(4-butylphenyl)ethynyl]benzyl}amino)benzoate

Methyl 8-({4-[(4-butylphenyl)ethynyl]benzyl}amino)-5,6,7,8-tetrahydronaphthalene-2-carboxylate

6-({4-[(4-Chlorophenyl)ethynyl]benzyl}amino)-2,2-dimethyl-4H-1,3-benzodioxin-4-one

4-[(4-Butylphenyl)ethynyl]-2-fluorobenzaldehyde

Methyl 8-({4-[(4-fluorophenyl)ethynyl]benzyl}amino)-5,6,7,8-tetrahydro-2-naphthalenecarboxylate

6-[(4-Butylphenyl)ethynyl]nicotinaldehyde

Methyl 5-({4-[(4-butylphenyl)ethynyl]benzyl}amino)-2-fluorobenzoate

Ethyl 3-({4-[(4-butylphenyl)ethynyl]benzyl}amino)-4-fluorobenzoate

7-[((E)-{4-[(4-Chlorophenyl)ethynyl]phenyl}methylidene)amino]-2,2-dimethyl-4H-1,3-benzodioxin-4-one

Methyl 4-({4-[(4-butylphenyl)ethynyl]benzyl}amino)-2-fluorobenzoate

7-({4-[(4-Methoxyphenyl)ethynyl]benzyl}amino)-2,2-dimethyl-4H-1,3-benzodioxin-4-one